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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/037,051	11/07/2001	Jaehyeong Kim	13-4	5569

7590 02/08/2005

Docket Administrator (Room 3J-219)
Lucent Technologies Inc.
101 Crawfords Corner Road
Holmdel, NJ 07733-3030

EXAMINER	
WONG, LINDA	
ART UNIT	PAPER NUMBER
2634	

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/037,051	KIM ET AL.	
	Examiner	Art Unit	
	Linda Wong	2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 November 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11 and 15-20* is/are rejected.

7)☒ Claim(s) *12-14* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 November 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. **Claim 15, line 2**, the long written terminology for the abbreviations of the terms "I and Q" should be included in the claim on the first instance of the use. For example, "in-phase and quadrature-phase" should be included.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11** are rejected under 35 U.S.C. 102(b) as being unpatentable by Long (US Patent No.: 6240141).
   a. **Claim 1**, McCoy discloses a dynamic method for locating a peak whose amplitude exceeds a predetermined threshold within a portion, samples within a window, and adjusts, adds, each of the inputs found within the window. (Fig. 8, labels 804 and 810)
   b. **Claim 2**, McCoy discloses a method that continuously finds peaks above a threshold within the window. (Fig. 8, label 814 feedback to label 804) Due to McCoy's teaching of a continuous search for peaks within a window, it is inherent that at least one of the peaks found is the highest peak within the window.
   c. **Claim 3**, McCoy discloses a composite signal, composes from multiple channels carrying more than one frequency carrier, that examines the

composite signal continuously for multiple peaks that are above the predetermined threshold. (Fig. 5, labels 804, 810, and 812 and 814) McCoy also discloses that his invention compensates for different distortions within the signal. (Col. 1, lines 27-48)

d. **Claim 4**, McCoy discloses continuous examining the composite signal to discover other peaks above the threshold within a window and adjusting the signal to correct those peaks found. (Fig. 8, labels 504, 506, 810, 814, and 812)

e. **Claim 5**, McCoy discloses continuous examination of the composite signal for peaks above the threshold and adjusts the signals within the window when one is found. (Fig. 8, labels 504, 506, 810, 814, and 812)

f. **Claim 6** inherits all the limitations of claims 1 and 3, but claims 1 and 3 does not recite a second window. McCoy discloses a window that is changed once the samples within the batch has been completely searched through. (Fig. 8, labels 812 and 814)

g. **Claim 7** inherits all the limitations of claim 4, but claim 4 does not recite an "additional threshold-correcting signal". McCoy discloses an "additional threshold-correcting signal" found by examining the signal at a different window and discovering more peaks within this section.

h. **Claim 8** inherits all the limitations of claim 5 but claim 5 does not recite an "additional threshold-correcting signal", which is explained in the rejection of claim 4.

i. **Claim 9**, McCoy discloses a peak detector, which is well known to compose of an amplifier and a clipping filter in the form of a diode, that locates the peak and the amplitude excess, phase and time of the peak. (Col. 5, lines 37-39)

j. **Claim 10**, McCoy discloses a delay device in the form of a modulator and a summing device that sums the output from the phase detector, which performs the process in Fig. 8. (Fig. 3, labels 304 and 305)

k. **Claim 11**, McCoy discloses a clipping factor calculator, label 806 in Fig. 8, that calculates the excess amplitude, which inherently calculates the magnitude or amplitude of the threshold compensating, correcting, signal, which is the portion of the signal within a window that the method is currently examining for peaks above a threshold (label 804 and 814).

Claim Rejections - 35 USC § 103

3. **Claim 15** is rejected under 35 U.S.C. 103(a) as being unpatentable over McCoy (US Patent No.: 6147984) further in view of Yang (US Patent No.: 6504862).

a. **Claim 15**, Although McCoy does not disclose in-phase and quadrature (I and Q) components of a signal, Yang discloses method and apparatus for reducing the peak to average power in a CDMA signal, which contains I and Q components in the signal. (Fig. 2, label 14) It is obvious to one skilled in the art that a CDMA signal, usually operating in PSK, would inherently contain I and Q components within its signal.

4. **Claim 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over McCoy (US Patent No.: 6147984) further in view of Long (US Patent No.: 6240141).

   a. **Claim 16**, McCoy discloses a system that searches for the first highest peak above a threshold within a portion or window of samples of the signal (label 804), calculating the magnitude of the first highest peak (label 806), examines the composite signal again, and adding or adjusting the threshold with the first window of samples at the position of the time in which the peak was found. Although McCoy does not teach the calculation of the polarity of the first highest peak, Long discloses the polarity of the subset or portion in which a peak greater than the threshold was found. (Fig. 2, label 56) It would be obvious to one skilled in the art to calculate the polarity to discover the best peak reduction effect. (Col. 6, lines 57-60)

5. **Claim 17, 18, 19, 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over McCoy (US Patent No.: 6147984) further in view of Long (US Patent No.: 6240141) further in view of (Kiykioglu (US Patent No.: 6754285).

   a. **Claim 17**, McCoy discloses a continuous search for other peaks within the window. Although McCoy does not teach an examination of at least one unwanted oscillation has been introduced into the composite signal, Kiykioglu discloses a procedure that avoids signal distortion. (Fig. 2, label 215) It would be obvious to one skilled in the art to include such a procedure as Kiykioglu teaches to avoid signal distortion. (Fig. 2, label 215)

b. **Claim 18** inherits all the limitations of claim 16, but claim 16 does not recite a second window and a second highest peak. McCoy discloses iterations that continuously, where the window is changed so that the signal will be examined at different windows and other peaks within this different window are found. (Fig. 8, label 814 and Fig. 5) It would be obvious to use a continuously changing window to calculate all the peaks within the signal to reduce the peak-to-average ratio.

c. **Claim 19** inherits all the limitations of claim 7, but claim 7 does not recite a "second-threshold correcting signal". McCoy discloses an iterative method and apparatus that continuously finds peaks within an interchanging window, where the window is changed once the entirety of the signal within this window is searched. McCoy inherently determines a second threshold-correcting signal by disclosing such a method and apparatus. (Fig. 8, labels 814 and 804) It would be obvious to one skilled in the art continuously find peaks above a threshold within an interchanging window to reduce the peak to average ratio.

d. **Claim 20** inherits all the limitations of claim 8, but claim 8 does not recite a "second-threshold correcting signal", which is explained in the rejection of claim 19.

Allowable Subject Matter

6. **Claims 12 - 14** would be allowable if rewritten to overcome the rejection(s) set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linda Wong whose telephone number is 571-272-6044. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571) 272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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STEPHEN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600